

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for generating an enhanced compressed digital image for selective recompression, comprising the steps of:
 - a) capturing a digital image;
 - b) generating additional information relating to the importance of photographed subject and corresponding background regions of the digital image;
 - c) compressing the digital image to form a compressed digital image;
 - d) associating the additional information with the compressed digital image to generate the enhanced compressed digital image; and
 - ~~e) storing the enhanced compressed digital image in a data storage device~~
 - e) recompressing the compressed digital image, found in the enhanced compressed digital image, responsive to the additional information, also found in the enhanced compressed digital image, to provide a recompressed digital image that does not exceed a target size less than the size of the compressed digital image in step c.
2. (Original) The method claimed in claim 1, wherein the additional information generated in step (b) is further compressed to generate compressed additional information before the associating step.
3. (Original) The method claimed in claim 2, wherein the step of further compressing the additional information employs a lossless compression technique.

4. (Original) The method claimed in claim 1 wherein the digital image is one of a sequence of digital motion images.

5. (Original) The method claimed in claim 1 wherein the step of compressing the digital image employs JPEG compression technique.

6. (Original) The method claimed in claim 1 wherein the step of compressing the digital image employs JPEG2000 compression technique.

7. (Original) The method claimed in claim 1 wherein generating the additional information further comprises the steps of:

b) collecting data from separate sensing elements, wherein all data is collected at the time of capturing the digital image.

8. (Original) The method claimed in claim 1 wherein the additional information is a main subject belief map containing a continuum of belief values relating to the importance of the subject and background regions in the digital image.

9. (Original) The method claimed in claim 8 wherein generating the main subject belief map comprises the steps of:

a1) extracting regions of homogeneous properties from the digital image;

a2) extracting for each of the regions, at least one structural saliency feature and at least one semantic saliency feature; and

a3) integrating the at least one structural saliency feature and the at least one semantic saliency feature using a probabilistic reasoning engine into an estimate of a belief that each region is the main subject.

10. (Original) The method claimed in claim 9 wherein generating the main subject belief map further comprises the steps of:

- b) collecting data from separate sensing elements, wherein all data is collected at the time of capturing the digital image; and
- c) utilizing the collected data for modifying the estimate of the belief that each region is the main subject.

Claims 11-26 are canceled.

27. (Original) The method claimed in claim 1 wherein the step of generating additional information includes the steps of:

- a) calculating a representation of a relative strength of high-frequency components in regions of the image; and
- b) compressing and encoding the representation of the relative strength of high-frequency components for inclusion with the compressed digital image.

28. (Original) The method claimed in claim 1 wherein the step of generating the additional information comprises the steps of:

- a) tracking eye movement, during capture, using eye tracking sensors in a camera viewfinder;
- b) generating gaze-tracking data from the eye tracking sensors; and
- c) encoding the gaze-tracking data.

29. (Original) The method claimed in claim 1 wherein the step of generating the additional information comprises the steps of:

- a) capturing a depth map of objects in each frame using a depth sensor;
- b) generating depth data from the depth sensor; and
- c) encoding the depth data.

Claims 30 and 31 are canceled.

32. (New) A system for generating an enhanced compressed digital image for selective recompression, comprising:

- a) means for capturing a digital image;
- b) means for generating additional information relating to the importance of photographed subject and corresponding background regions of the digital image;
- c) means for compressing the digital image to form a compressed digital image;
- d) means for associating the additional information with the compressed digital image to generate the enhanced compressed digital image;
- e) means for storing the enhanced compressed digital image in a data storage device;
- f) means for recompressing the compressed digital image, found in the enhanced compressed digital image, responsive to the additional information, also found in the enhanced compressed digital image, to provide a recompressed digital image that does not exceed a target size less than the size of the compressed digital image in step c.

33. (New) The method claimed in claim 1 wherein the step of recompressing the digital image employs JPEG compression technique.

34. (New) The method claimed in claim 1 wherein the step of recompressing the digital image employs JPEG2000 compression technique.

35. (New) The method claimed in claim 1, further comprising the step of: storing the enhanced compressed digital image in a data storage device.